

Connecting via Winsock to STN

Trying 3106016892...Open

Welcome to STN International! Enter x:x  
LOGINID:ssspta1626gms  
PASSWORD:  
TERMINAL (ENTER 1, 2, 3, OR ?):2

\*\*\*\*\* Welcome to STN International \*\*\*\*\*

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America  
NEWS 2 Dec 17 The CA Lexicon available in the CAPLUS and CA files  
NEWS 3 Feb 06 Engineering Information Encompass files have new names  
NEWS 4 Feb 16 TOXLINE no longer being updated  
NEWS 5 Apr 23 Search Derwent WPINDEX by chemical structure  
NEWS 6 Apr 23 PRE-1967 REFERENCES NOW SEARCHABLE IN CAPLUS AND CA  
NEWS 7 May 07 DGENE Reload

NEWS EXPRESS May 23 CURRENT WINDOWS VERSION IS V6.0a,  
CURRENT MACINTOSH VERSION IS V5.0C (ENG) AND V5.0JB (JP),  
AND CURRENT DISCOVER FILE IS DATED 06 APRIL 2001  
NEWS HOURS STN Operating Hours Plus Help Desk Availability  
NEWS INTER General Internet Information  
NEWS LOGIN Welcome Banner and News Items  
NEWS PHONE Direct Dial and Telecommunication Network Access to STN  
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

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\*\*\*\*\* STN Columbus \*\*\*\*\*

FILE 'HOME' ENTERED AT 14:41:12 ON 31 MAY 2001

=> file.registry

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.15	0.15

FILE 'REGISTRY' ENTERED AT 14:41:35 ON 31 MAY 2001  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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STRUCTURE FILE UPDATES: 30 MAY 2001 HIGHEST RN 339046-06-9  
DICTIONARY FILE UPDATES: 30 MAY 2001 HIGHEST RN 339046-06-9

TSCA INFORMATION NOW CURRENT THROUGH January 11, 2001

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Structure search limits have been increased. See HELP SLIMIT for details.

=>

Uploading casegs1.str

L1 STRUCTURE UPLOADED

=> d 12

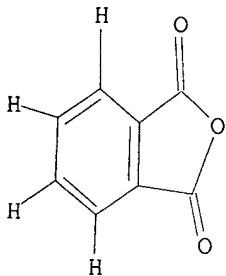
L2 NOT FOUND

The L-number entered has not been defined in this session, or it has been deleted. To see the L-numbers currently defined in this session, enter DISPLAY HISTORY at an arrow prompt (=>).

=> d 11

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 11

SAMPLE SEARCH INITIATED 14:42:37 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 2276 TO ITERATE

43.9% PROCESSED 1000 ITERATIONS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

50 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 42660 TO 48380

PROJECTED ANSWERS: 6769 TO 9163

L2 50 SEA SSS SAM L1

=> d 1-10

L2 ANSWER 1 OF 50 REGISTRY COPYRIGHT 2001 ACS

RN 314728-00-2 REGISTRY

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, sodium salt, polymer with 2,2-dimethyl-1,3-propanediol, hexanedioic acid, 1,6-hexanediol, 1,3-isobenzofurandione, 1,1'-methylenebis[4-isocyanatobenzene] and 1,3-propanediol (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,3-Isobenzofurandione, polymer with 2,2-dimethyl-1,3-propanediol, hexanedioic acid, 1,6-hexanediol, 1,1'-methylenebis[4-isocyanatobenzene], 1,3-propanediol and 5-sulfo-1,3-benzenedicarboxylic acid sodium salt (9CI)

CN 1,3-Propanediol, 2,2-dimethyl-, polymer with hexanedioic acid, 1,6-hexanediol, 1,3-isobenzofurandione, 1,1'-methylenebis[4-isocyanatobenzene], 1,3-propanediol and 5-sulfo-1,3-benzenedicarboxylic acid sodium salt (9CI)

CN 1,3-Propanediol, polymer with 2,2-dimethyl-1,3-propanediol, hexanedioic acid, 1,6-hexanediol, 1,3-isobenzofurandione, 1,1'-methylenebis[4-isocyanatobenzene] and 5-sulfo-1,3-benzenedicarboxylic acid sodium salt (9CI)

CN 1,6-Hexanediol, polymer with 2,2-dimethyl-1,3-propanediol, hexanedioic acid, 1,3-isobenzofurandione, 1,1'-methylenebis[4-isocyanatobenzene], 1,3-propanediol and 5-sulfo-1,3-benzenedicarboxylic acid sodium salt (9CI)

CN Benzene, 1,1'-methylenebis[4-isocyanato-, polymer with 2,2-dimethyl-1,3-propanediol, hexanedioic acid, 1,6-hexanediol, 1,3-isobenzofurandione, 1,3-propanediol and 5-sulfo-1,3-benzenedicarboxylic acid sodium salt (9CI)

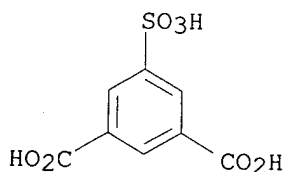
CN Hexanedioic acid, polymer with 2,2-dimethyl-1,3-propanediol, 1,6-hexanediol, 1,3-isobenzofurandione, 1,1'-methylenebis[4-isocyanatobenzene], 1,3-propanediol and 5-sulfo-1,3-benzenedicarboxylic acid sodium salt (9CI)

OTHER NAMES:

CN Adipic acid-1,6-hexanediol-4,4'-MDI-neopentyl glycol-phthalic  
anhydride-1,3-propylene glycol-sodium 5-sulfoisophthalate copolymer  
MF (C15 H10 N2 O2 . C8 H6 O7 S . C8 H4 O3 . C6 H14 O2 . C6 H10 O4 . C5 H12 O2  
. C3 H8 O2 . x Na)x  
CI PMS  
PCT Polyester, Polyester formed, Polyurethane, Polyurethane formed  
SR CA  
LC STN Files: CA, CAPLUS

CM 1

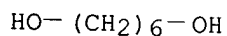
CRN 7800-91-1 (22326-31-4)  
CMF C8 H6 O7 S . x Na



●x Na

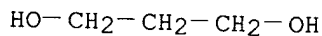
CM 2

CRN 629-11-8  
CMF C6 H14 O2



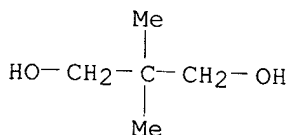
CM 3

CRN 504-63-2  
CMF C3 H8 O2



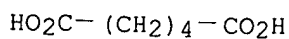
CM 4

CRN 126-30-7  
CMF C5 H12 O2



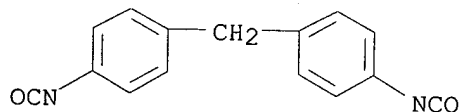
CM 5

CRN 124-04-9  
CMF C6 H10 O4



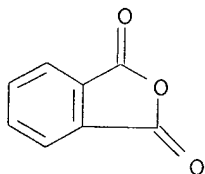
CM 6

CRN 101-68-8  
CMF C15 H10 N2 O2



CM 7

CRN 85-44-9  
CMF C8 H4 O3



1 REFERENCES IN FILE CA (1967 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L2 ANSWER 2 OF 50 REGISTRY COPYRIGHT 2001 ACS

RN 293306-03-3 REGISTRY

CN 1,3-Isobenzofurandione, polymer with 2,2'-[1,2-ethanediylbis(oxy)]bis[ethanol], 3a,4,7,7a-tetrahydro-4,7-methano-1H-indenyl ester, polymer with 3,6,9,12-tetraoxatetradeca-1,13-diene (9CI)  
(CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 3,6,9,12-Tetraoxatetradeca-1,13-diene, polymer with 2,2'-[1,2-ethanediylbis(oxy)]bis[ethanol] polymer with 1,3-isobenzofurandione 3a,4,7,7a-tetrahydro-4,7-methano-1H-indenyl ester (9CI)

CN Ethanol, 2,2'-[1,2-ethanediylbis(oxy)]bis-, polymer with 1,3-isobenzofurandione, 3a,4,7,7a-tetrahydro-4,7-methano-1H-indenyl ester, polymer with 3,6,9,12-tetraoxatetradeca-1,13-diene (9CI)

MF (C10 H18 O4 . C10 H12 O . x (C8 H4 O3 . C6 H14 O4)x)x

CI PMS

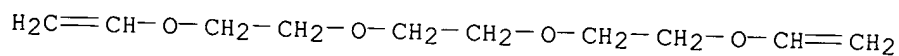
PCT Polyester, Polyester formed, Polyether, Polyether, Polyvinyl

SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 765-12-8  
CMF C10 H18 O4

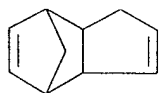


CM 2

CRN 293306-02-2  
CMF C10 H12 O . x (C8 H4 O3 . C6 H14 O4)x

CM 3

CRN 52297-00-4  
CMF C10 H12 O  
CCI IDS



D1-OH

CM 4

CRN 42992-49-4  
CMF (C8 H4 O3 . C6 H14 O4)x  
CCI PMS

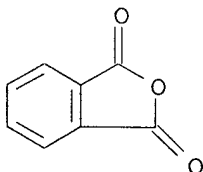
CM 5

CRN 112-27-6  
CMF C6 H14 O4

HO-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-O-CH<sub>2</sub>-CH<sub>2</sub>-OH

CM 6

CRN 85-44-9  
CMF C8 H4 O3



1 REFERENCES IN FILE CA (1967 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L2 ANSWER 3 OF 50 REGISTRY COPYRIGHT 2001 ACS

RN 269718-00-5 REGISTRY

CN Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-,  
2-[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]hydrazide,  
polymer with Epon 160, hexahydromethyl-1,3-isobenzofurandione,  
1,3-isobenzofurandione and 6-[2-(2-methyl-1H-imidazol-1-yl)ethyl]-1,3,5-  
triazine-2,4-diamine compd. with 1,3,5-triazine-2,4,6(1H,3H,5H)-trione  
(1:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, compd. with 6-[2-(2-methyl-1H-  
imidazol-1-yl)ethyl]-1,3,5-triazine-2,4-diamine (1:1), polymer with  
3,5-bis(1,1-dimethylethyl)-4-hydroxybenzenepropanoic acid  
2-[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]hydrazide,  
Epon 160, hexahydromethyl-1,3-isobenzofurandione and 1,3-  
isobenzofurandione (9CI)

CN 1,3,5-Triazine-2,4-diamine, 6-[2-(2-methyl-1H-imidazol-1-yl)ethyl]-,  
compd. with 1,3,5-triazine-2,4,6(1H,3H,5H)-trione (1:1), polymer with  
3,5-bis(1,1-dimethylethyl)-4-hydroxybenzenepropanoic acid  
2-[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]hydrazide,  
Epon 160, hexahydromethyl-1,3-isobenzofurandione and 1,3-  
isobenzofurandione (9CI)

CN 1,3-Isobenzofurandione, hexahydromethyl-, polymer with  
 3,5-bis(1,1-dimethylethyl)-4-hydroxybenzenepropanoic acid  
 2-[3-[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]-1-oxopropyl]hydrazide,  
 Epon 160, 1,3-isobenzofurandione and 6-[2-(2-methyl-1H-imidazol-1-  
 yl)ethyl]-1,3,5-triazine-2,4-diamine compd. with 1,3,5-triazine-  
 2,4,6(1H,3H,5H)-trione (1:1) (9CI)

CN 1,3-Isobenzofurandione, polymer with 3,5-bis(1,1-dimethylethyl)-4-  
 hydroxybenzenepropanoic acid 2-[3-[3,5-bis(1,1-dimethylethyl)-4-  
 hydroxyphenyl]-1-oxopropyl]hydrazide, Epon 160, hexahydromethyl-1,3-  
 isobenzofurandione and 6-[2-(2-methyl-1H-imidazol-1-yl)ethyl]-1,3,5-  
 triazine-2,4-diamine compd. with 1,3,5-triazine-2,4,6(1H,3H,5H)-trione  
 (1:1) (9CI)

CN Epon 160, polymer with 3,5-bis(1,1-dimethylethyl)-4-  
 hydroxybenzenepropanoic acid 2-[3-[3,5-bis(1,1-dimethylethyl)-4-  
 hydroxyphenyl]-1-oxopropyl]hydrazide, hexahydromethyl-1,3-  
 isobenzofurandione, 1,3-isobenzofurandione and 6-[2-(2-methyl-1H-imidazol-  
 1-yl)ethyl]-1,3,5-triazine-2,4-diamine compd. with 1,3,5-triazine-  
 2,4,6(1H,3H,5H)-trione (1:1) (9CI)

MF (C34 H52 N2 O4 . C9 H13 N7 . C9 H12 O3 . C8 H4 O3 . C3 H3 N3 O3 .  
 Unspecified)x

CI PMS, COM

PCT Manual component, Polyamide, Polyamide formed, Polyester, Polyester  
 formed, Polyhydrazide, Polyether

SR CA

CM 1

CRN 243463-73-2

CMF Unspecified

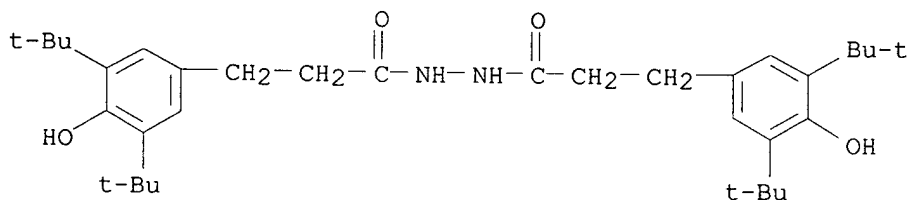
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 32687-78-8

CMF C34 H52 N2 O4

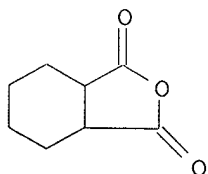


CM 3

CRN 25550-51-0

CMF C9 H12 O3

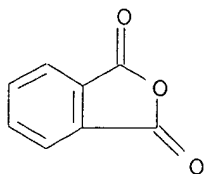
CCI IDS



D1-Me

CM 4

CRN 85-44-9  
CMF C8 H4 O3

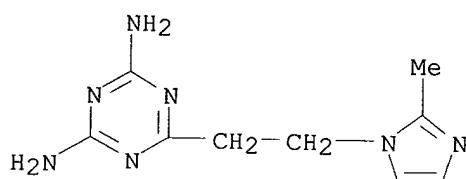


CM 5

CRN 68490-66-4  
CMF C9 H13 N7 . C3 H3 N3 O3

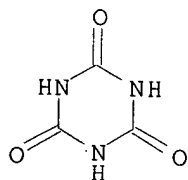
CM 6

CRN 38668-46-1  
CMF C9 H13 N7



CM 7

CRN 108-80-5  
CMF C3 H3 N3 O3



L2 ANSWER 4 OF 50 REGISTRY COPYRIGHT 2001 ACS  
RN 268728-73-0 REGISTRY  
CN Nonanedioic acid, polymer with 2-(hydroxymethyl)-2-methyl-1,3-propanediol and 1,3-isobenzofurandione (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 1,3-Isobenzofurandione, polymer with 2-(hydroxymethyl)-2-methyl-1,3-propanediol and nonanedioic acid (9CI)  
CN 1,3-Propanediol, 2-(hydroxymethyl)-2-methyl-, polymer with 1,3-isobenzofurandione and nonanedioic acid (9CI)  
MF (C9 H16 O4 . C8 H4 O3 . C5 H12 O3)x  
CI PMS, COM  
PCT Polyester, Polyester formed  
SR CA

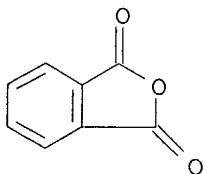
CM 1

CRN 123-99-9  
CMF C9 H16 O4

HO<sub>2</sub>C- (CH<sub>2</sub>)<sub>7</sub>-CO<sub>2</sub>H

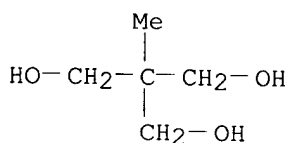
CM 2

CRN 85-44-9  
CMF C8 H4 O3



CM 3

CRN 77-85-0  
CMF C5 H12 O3

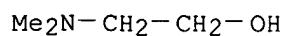


L2 ANSWER 5 OF 50 REGISTRY COPYRIGHT 2001 ACS  
RN 260408-50-2 REGISTRY  
CN Hexanedioic acid, polymer with 1,4-cyclohexanedimethanol, 1,3-dihydro-1,3-dioxo-5-isobenzofurancarboxylic acid, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and 1,3-isobenzofurandione, compd. with 2-(dimethylamino)ethanol (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 1,3-Isobenzofurandione, polymer with 1,4-cyclohexanedimethanol, 1,3-dihydro-1,3-dioxo-5-isobenzofurancarboxylic acid, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and hexanedioic acid, compd. with 2-(dimethylamino)ethanol (9CI)  
CN 1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with 1,4-cyclohexanedimethanol, 1,3-dihydro-1,3-dioxo-5-isobenzofurancarboxylic acid, hexanedioic acid and 1,3-isobenzofurandione, compd. with 2-(dimethylamino)ethanol (9CI)  
CN 1,4-Cyclohexanedimethanol, polymer with 1,3-dihydro-1,3-dioxo-5-isobenzofurancarboxylic acid, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, hexanedioic acid and 1,3-isobenzofurandione, compd. with 2-(dimethylamino)ethanol (9CI)  
CN 5-Isobenzofurancarboxylic acid, 1,3-dihydro-1,3-dioxo-, polymer with 1,4-cyclohexanedimethanol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, hexanedioic acid and 1,3-isobenzofurandione, compd. with 2-(dimethylamino)ethanol (9CI)  
CN Ethanol, 2-(dimethylamino)-, compd. with 1,4-cyclohexanedimethanol polymer with 1,3-dihydro-1,3-dioxo-5-isobenzofurancarboxylic acid, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, hexanedioic acid and 1,3-isobenzofurandione (9CI)  
MF (C9 H4 O5 . C8 H16 O2 . C8 H4 O3 . C6 H14 O3 . C6 H10 O4)x . x C4 H11 N O  
PCT Polyester, Polyester formed  
SR CAS Registry Services

CM 1

CRN 108-01-0  
CMF C4 H11 N O





CM 2

CRN 260408-49-9

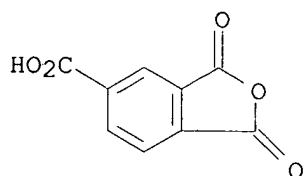
CMF (C9 H4 O5 . C8 H16 O2 . C8 H4 O3 . C6 H14 O3 . C6 H10 O4)x

CCI PMS

CM 3

CRN 552-30-7

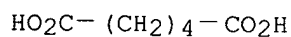
CMF C9 H4 O5



CM 4

CRN 124-04-9

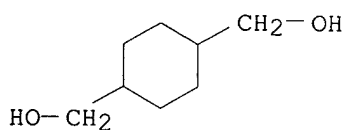
CMF C6 H10 O4



CM 5

CRN 105-08-8

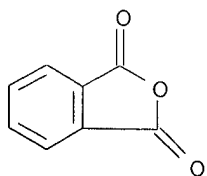
CMF C8 H16 O2



CM 6

CRN 85-44-9

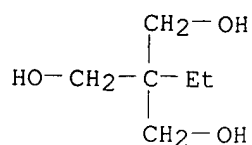
CMF C8 H4 O3



CM 7

CRN 77-99-6

CMF C6 H14 O3



L2 ANSWER 6 OF 50 REGISTRY COPYRIGHT 2001 ACS

RN 252986-99-5 REGISTRY

CN Hexanedioic acid, polymer with Coronate MX, 1,2-ethanediol, .alpha.-hydro-.omega.-hydroxypoly[oxy(methyl-1,2-ethanediyl)], 1,3-isobenzofurandione, 1,1'-methylenebis[4-isocyanatobenzene] and 2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,2-Ethanediol, polymer with Coronate MX, hexanedioic acid, .alpha.-hydro-.omega.-hydroxypoly[oxy(methyl-1,2-ethanediyl)], 1,3-isobenzofurandione, 1,1'-methylenebis[4-isocyanatobenzene] and 2,2'-oxybis[ethanol] (9CI)

CN 1,3-Isobenzofurandione, polymer with Coronate MX, 1,2-ethanediol, hexanedioic acid, .alpha.-hydro-.omega.-hydroxypoly[oxy(methyl-1,2-ethanediyl)], 1,1'-methylenebis[4-isocyanatobenzene] and 2,2'-oxybis[ethanol] (9CI)

CN Benzene, 1,1'-methylenebis[4-isocyanato-, polymer with Coronate MX, 1,2-ethanediol, hexanedioic acid, .alpha.-hydro-.omega.-hydroxypoly[oxy(methyl-1,2-ethanediyl)], 1,3-isobenzofurandione and 2,2'-oxybis[ethanol] (9CI)

CN Coronate MX, polymer with 1,2-ethanediol, hexanedioic acid, .alpha.-hydro-.omega.-hydroxypoly[oxy(methyl-1,2-ethanediyl)], 1,3-isobenzofurandione, 1,1'-methylenebis[4-isocyanatobenzene] and 2,2'-oxybis[ethanol] (9CI)

CN Ethanol, 2,2'-oxybis-, polymer with Coronate MX, 1,2-ethanediol, hexanedioic acid, .alpha.-hydro-.omega.-hydroxypoly[oxy(methyl-1,2-ethanediyl)], 1,3-isobenzofurandione and 1,1'-methylenebis[4-isocyanatobenzene] (9CI)

CN Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with Coronate MX, 1,2-ethanediol, hexanedioic acid, 1,3-isobenzofurandione, 1,1'-methylenebis[4-isocyanatobenzene] and 2,2'-oxybis[ethanol] (9CI)

MF (C15 H10 N2 O2 . C8 H4 O3 . C6 H10 O4 . C4 H10 O3 . (C3 H6 O)n H2 O . C2 H6 O2 . Unspecified)x

CI PMS

PCT Manual component, Polyester, Polyester formed, Polyether, Polyether, Polyurethane, Polyurethane formed

SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 196316-51-5

CMF Unspecified

CCI PMS, MAN

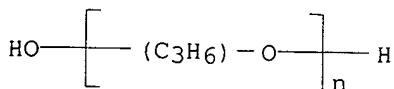
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 25322-69-4

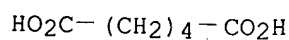
CMF (C3 H6 O)n H2 O

CCI IDS, PMS



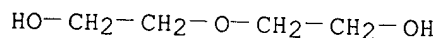
CM 3

CRN 124-04-9  
CMF C6 H10 O4



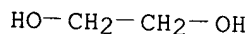
CM 4

CRN 111-46-6  
CMF C4 H10 O3



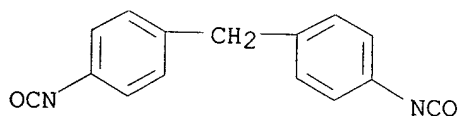
CM 5

CRN 107-21-1  
CMF C2 H6 O2



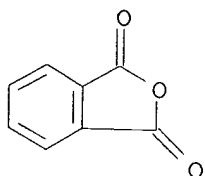
CM 6

CRN 101-68-8  
CMF C15 H10 N2 O2



CM 7

CRN 85-44-9  
CMF C8 H4 O3



1 REFERENCES IN FILE CA (1967 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

- L2 ANSWER 7 OF 50 REGISTRY COPYRIGHT 2001 ACS  
RN 250664-08-5 REGISTRY  
CN Hexanedioic acid, polymer with (dimethylamino)benzoic acid, 2,2-dimethyl-1,3-propanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, hexahydro-1,3-isobenzofurandione, 1,6-hexanediol and 1,3-isobenzofurandione (9CI) (CA INDEX NAME)
- OTHER CA INDEX NAMES:
- CN 1,3-Isobenzofurandione, hexahydro-, polymer with (dimethylamino)benzoic acid, 2,2-dimethyl-1,3-propanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, hexanedioic acid, 1,6-hexanediol and 1,3-isobenzofurandione (9CI)
- CN 1,3-Isobenzofurandione, polymer with (dimethylamino)benzoic acid,

2,2-dimethyl-1,3-propanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, hexahydro-1,3-isobenzofurandione, hexanedioic acid and 1,6-hexanediol (9CI)

CN 1,3-Propanediol, 2,2-dimethyl-, polymer with (dimethylamino)benzoic acid, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, hexahydro-1,3-isobenzofurandione, hexanedioic acid, 1,6-hexanediol and 1,3-isobenzofurandione (9CI)

CN 1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with (dimethylamino)benzoic acid, 2,2-dimethyl-1,3-propanediol, hexahydro-1,3-isobenzofurandione, hexanedioic acid, 1,6-hexanediol and 1,3-isobenzofurandione (9CI)

CN 1,6-Hexanediol, polymer with (dimethylamino)benzoic acid, 2,2-dimethyl-1,3-propanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, hexahydro-1,3-isobenzofurandione, hexanedioic acid and 1,3-isobenzofurandione (9CI)

CN Benzoic acid, (dimethylamino)-, polymer with 2,2-dimethyl-1,3-propanediol, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, hexahydro-1,3-isobenzofurandione, hexanedioic acid, 1,6-hexanediol and 1,3-isobenzofurandione (9CI)

MF (C9 H11 N O2 . C8 H10 O3 . C8 H4 O3 . C6 H14 O3 . C6 H14 O2 . C6 H10 O4 . C5 H12 O2)x

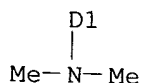
CI PMS, COM

PCT Polyester, Polyester formed, Polyether

SR CA

CM 1

CRN 53175-72-7  
CMF C9 H11 N O2  
CCI IDS



D1-CO<sub>2</sub>H

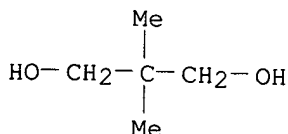
CM 2

CRN 629-11-8  
CMF C6 H14 O2

HO-(CH<sub>2</sub>)<sub>6</sub>-OH

CM 3

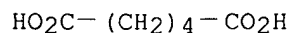
CRN 126-30-7  
CMF C5 H12 O2



CM 4

CRN 124-04-9

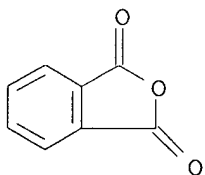
CMF C6 H10 O4



CM 5

CRN 85-44-9

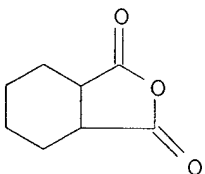
CMF C8 H4 O3



CM 6

CRN 85-42-7

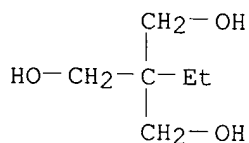
CMF C8 H10 O3



CM 7

CRN 77-99-6

CMF C6 H14 O3



L2 ANSWER 8 OF 50 REGISTRY COPYRIGHT 2001 ACS

RN 249934-08-5 REGISTRY

CN 1,3-Benzenedicarboxylic acid, polymer with 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol and 1,3-isobenzofurandione, 2-hydroxy-4-[[[(1-oxo-2-propenyl)oxy]methyl]cyclohexyl ester, polymer with formaldehyde, 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 4-(1-oxo-2-propenyl)morpholine and .alpha.-(1-oxo-2-propenyl)-.omega.-phenoxypropyl(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,2-Ethanediol, polymer with 1,3-benzenedicarboxylic acid, 2,2-dimethyl-1,3-propanediol and 1,3-isobenzofurandione, 2-hydroxy-4-[[[(1-oxo-2-propenyl)oxy]methyl]cyclohexyl ester, polymer with formaldehyde, 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate, 4-(1-oxo-2-propenyl)morpholine and

.alpha.-(1-oxo-2-propenyl)-.omega.-phenoxy poly(oxy-1,2-ethanediyl) (9CI)  
 CN 1,3-Isobenzofurandione, polymer with 1,3-benzenedicarboxylic acid,  
 2,2-dimethyl-1,3-propanediol and 1,2-ethanediol, 2-hydroxy-4-[[[(1-oxo-2-  
 propenyl)oxy]methyl]cyclohexyl ester, polymer with formaldehyde,  
 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl  
 di-2-propenoate, 4-(1-oxo-2-propenyl)morpholine and .alpha.-(1-oxo-2-  
 propenyl)-.omega.-phenoxy poly(oxy-1,2-ethanediyl) (9CI)  
 CN 1,3-Propanediol, 2,2-dimethyl-, polymer with 1,3-benzenedicarboxylic acid,  
 1,2-ethanediol and 1,3-isobenzofurandione, 2-hydroxy-4-[[[(1-oxo-2-  
 propenyl)oxy]methyl]cyclohexyl ester, polymer with formaldehyde,  
 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl  
 di-2-propenoate, 4-(1-oxo-2-propenyl)morpholine and .alpha.-(1-oxo-2-  
 propenyl)-.omega.-phenoxy poly(oxy-1,2-ethanediyl) (9CI)  
 CN 2-Propenoic acid, 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-  
 propanediyl ester, polymer with 1,3-benzenedicarboxylic acid polymer with  
 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol and 1,3-isobenzofurandione  
 2-hydroxy-4-[[[(1-oxo-2-propenyl)oxy]methyl]cyclohexyl ester, formaldehyde,  
 4-(1-oxo-2-propenyl)morpholine and .alpha.-(1-oxo-2-propenyl)-.omega.-  
 phenoxy poly(oxy-1,2-ethanediyl) (9CI)  
 CN Formaldehyde, polymer with 1,3-benzenedicarboxylic acid polymer with  
 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol and 1,3-isobenzofurandione  
 2-hydroxy-4-[[[(1-oxo-2-propenyl)oxy]methyl]cyclohexyl ester,  
 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl  
 di-2-propenoate, 4-(1-oxo-2-propenyl)morpholine and .alpha.-(1-oxo-2-  
 propenyl)-.omega.-phenoxy poly(oxy-1,2-ethanediyl) (9CI)  
 CN Morpholine, 4-(1-oxo-2-propenyl)-, polymer with 1,3-benzenedicarboxylic  
 acid polymer with 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol and  
 1,3-isobenzofurandione 2-hydroxy-4-[[[(1-oxo-2-  
 propenyl)oxy]methyl]cyclohexyl ester, formaldehyde, 2-(hydroxymethyl)-2-  
 [[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate and  
 .alpha.-(1-oxo-2-propenyl)-.omega.-phenoxy poly(oxy-1,2-ethanediyl) (9CI)  
 CN Poly(oxy-1,2-ethanediyl), .alpha.-(1-oxo-2-propenyl)-.omega.-phenoxy-,  
 polymer with 1,3-benzenedicarboxylic acid polymer with  
 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol and 1,3-isobenzofurandione  
 2-hydroxy-4-[[[(1-oxo-2-propenyl)oxy]methyl]cyclohexyl ester, formaldehyde,  
 2-(hydroxymethyl)-2-[[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl  
 di-2-propenoate and 4-(1-oxo-2-propenyl)morpholine (9CI)  
 OTHER NAMES:  
 CN Ethylene glycol-isophthalic acid-neopentyl glycol-phthalic anhydride  
 copolymer ester with 3,4-epoxycyclohexylmethyl acrylate-N-  
 acryloylmorpholine-Aronix M 101-pentaerythritol triacrylate-Nikalac BX  
 4000 copolymer  
 MF (C14 H18 O7 . C10 H16 O4 . x (C8 H6 O4 . C8 H4 O3 . C5 H12 O2 . C2 H6 O2)x  
 . C7 H11 N O2 . (C2 H4 O)n C9 H8 O2 . Unspecified)x  
 CI PMS  
 PCT Manual component, Polyacrylic, Polyester, Polyester formed, Polyether,  
 Polyether  
 SR CA  
 LC STN Files: CA, CAPLUS

CM 1

CRN 168678-74-8

CMF Unspecified

CCI PMS, MAN

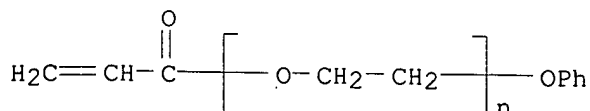
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 56641-05-5

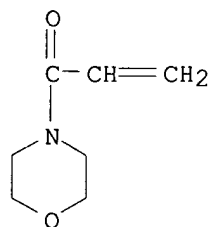
CMF (C2 H4 O)n C9 H8 O2

CCI PMS



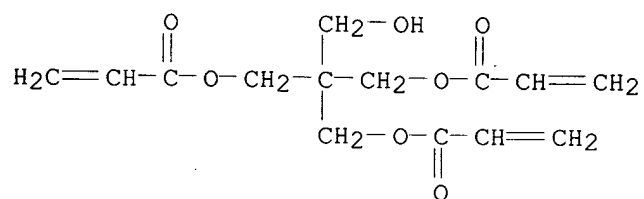
CM 3

CRN 5117-12-4  
CMF C7 H11 N O2



CM 4

CRN 3524-68-3  
CMF C14 H18 O7

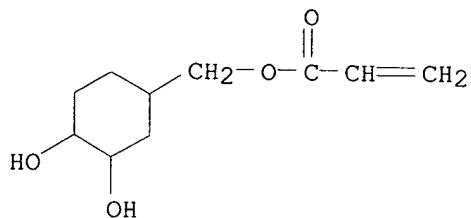


CM 5

CRN 249934-03-0  
CMF C10 H16 O4 . x (C8 H6 O4 . C8 H4 O3 . C5 H12 O2 . C2 H6 O2) x

CM 6

CRN 147321-05-9  
CMF C10 H16 O4

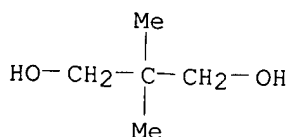


CM 7

CRN 80214-99-9  
CMF (C8 H6 O4 . C8 H4 O3 . C5 H12 O2 . C2 H6 O2) x  
CCI PMS

CM 8

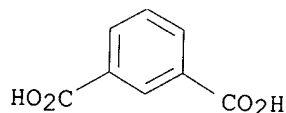
CRN 126-30-7  
CMF C5 H12 O2



CM 9

CRN 121-91-5

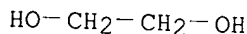
CMF C8 H6 O4



CM 10

CRN 107-21-1

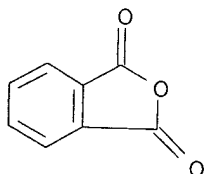
CMF C2 H6 O2



CM 11

CRN 85-44-9

CMF C8 H4 O3



1 REFERENCES IN FILE CA (1967 TO DATE)

1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L2 ANSWER 9 OF 50 REGISTRY COPYRIGHT 2001 ACS

RN 222853-65-8 REGISTRY

CN 1,3-Isobenzofurandione, polymer with 2,5-furandione, .alpha.,.alpha.'-[(1-methylethylidene)di-4,1-phenylene]bis[.omega.-hydroxypoly[oxy(methyl-1,2-ethanediyl)]]], 2,2'-oxybis[ethanol] and 1,2-propanediol (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,2-Propanediol, polymer with 2,5-furandione, 1,3-isobenzofurandione, .alpha.,.alpha.'-[(1-methylethylidene)di-4,1-phenylene]bis[.omega.-hydroxypoly[oxy(methyl-1,2-ethanediyl)]] and 2,2'-oxybis[ethanol] (9CI)

CN 2,5-Furandione, polymer with 1,3-isobenzofurandione, .alpha.,.alpha.'-[(1-methylethylidene)di-4,1-phenylene]bis[.omega.-hydroxypoly[oxy(methyl-1,2-ethanediyl)]]], 2,2'-oxybis[ethanol] and 1,2-propanediol (9CI)

CN Ethanol, 2,2'-oxybis-, polymer with 2,5-furandione, 1,3-isobenzofurandione, .alpha.,.alpha.'-[(1-methylethylidene)di-4,1-phenylene]bis[.omega.-hydroxypoly[oxy(methyl-1,2-ethanediyl)]] and 1,2-propanediol (9CI)

CN Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.'-[(1-methylethylidene)di-4,1-phenylene]bis[.omega.-hydroxy-, polymer with 2,5-furandione, 1,3-isobenzofurandione, 2,2'-oxybis[ethanol] and 1,2-propanediol (9CI)

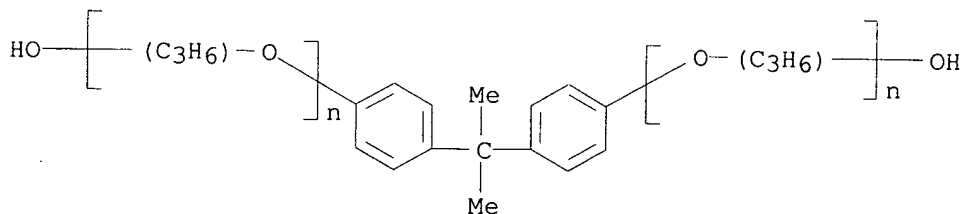
MF (C8 H4 O3 . C4 H10 O3 . C4 H2 O3 . C3 H8 O2 . (C3 H6 O)n (C3 H6 O)n C15



H16 O2)x  
 CI PMS  
 PCT Polyester, Polyester formed, Polyether, Polyvinyl  
 SR CA  
 LC STN Files: CA, CAPLUS

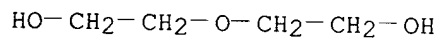
CM 1

CRN 37353-75-6  
 CMF (C3 H6 O)n (C3 H6 O)n C15 H16 O2  
 CCI IDS, PMS



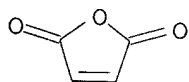
CM 2

CRN 111-46-6  
 CMF C4 H10 O3



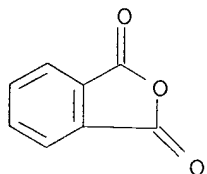
CM 3

CRN 108-31-6  
 CMF C4 H2 O3



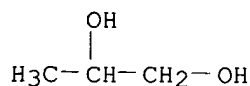
CM 4

CRN 85-44-9  
 CMF C8 H4 O3



CM 5

CRN 57-55-6  
 CMF C3 H8 O2



1 REFERENCES IN FILE CA (1967 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L2 ANSWER 10 OF 50 REGISTRY COPYRIGHT 2001 ACS

RN 219609-17-3 REGISTRY

CN 1,3-Isobenzofurandione, polymer with 1,2-ethanediol, 2,5-furandione,  
2-methyl-1,3-propanediol and 1,2-propanediol, 2-ethylhexyl ester (9CI)  
(CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1,2-Ethanediol, polymer with 2,5-furandione, 1,3-isobenzofurandione,  
2-methyl-1,3-propanediol and 1,2-propanediol, 2-ethylhexyl ester (9CI)

CN 1,2-Propanediol, polymer with 1,2-ethanediol, 2,5-furandione,  
1,3-isobenzofurandione and 2-methyl-1,3-propanediol, 2-ethylhexyl ester  
(9CI)

CN 1,3-Propanediol, 2-methyl-, polymer with 1,2-ethanediol, 2,5-furandione,  
1,3-isobenzofurandione and 1,2-propanediol, 2-ethylhexyl ester (9CI)

CN 2,5-Furandione, polymer with 1,2-ethanediol, 1,3-isobenzofurandione,  
2-methyl-1,3-propanediol and 1,2-propanediol, 2-ethylhexyl ester (9CI)

MF C8 H18 O . x (C8 H4 O3 . C4 H10 O2 . C4 H2 O3 . C3 H8 O2 . C2 H6 O2)x

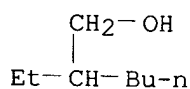
PCT Polyester, Polyester formed, Polyvinyl

SR CAS Registry Services

CM 1

CRN 104-76-7

CMF C8 H18 O



CM 2

CRN 219609-16-2

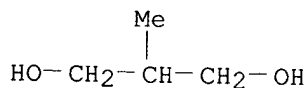
CMF (C8 H4 O3 . C4 H10 O2 . C4 H2 O3 . C3 H8 O2 . C2 H6 O2)x

CCI PMS

CM 3

CRN 2163-42-0

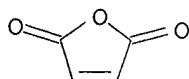
CMF C4 H10 O2



CM 4

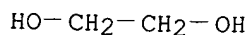
CRN 108-31-6

CMF C4 H2 O3



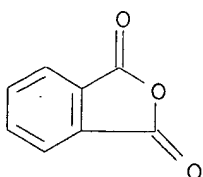
CM 5

CRN 107-21-1  
CMF C2 H6 O2



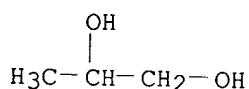
CM 6

CRN 85-44-9  
CMF C8 H4 O3



CM 7

CRN 57-55-6  
CMF C3 H8 O2



=> d hist

(FILE 'HOME' ENTERED AT 14:41:12 ON 31 MAY 2001)

FILE 'REGISTRY' ENTERED AT 14:41:35 ON 31 MAY 2001

L1 STRUCTURE UPLOADED  
L2 50 S L1

=> s l1 sss full

FULL SEARCH INITIATED 14:44:12 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 48303 TO ITERATE

100.0% PROCESSED 48303 ITERATIONS  
SEARCH TIME: 00.00.03

9873 ANSWERS

L3 9873 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS

FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
149.80	149.95

FILE 'CAPLUS' ENTERED AT 14:44:30 ON 31 MAY 2001

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This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

CAPLUS now provides online access to patents and literature covered in CA from 1947 to the present. On April 22, 2001, bibliographic information and abstracts were added for over 2.2 million references published in CA from 1947 to 1966.

The CA Lexicon is now available in the Controlled Term (/CT) field. Enter HELP LEXICON for full details.

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=> d histr

YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:y

'HISTR' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

REG - RN  
SAM - Index Name, MF, and structure - no RN  
FIDE - All substance data, except sequence data  
IDE - FIDE, but only 50 names  
SQIDE - IDE, plus sequence data  
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used  
SQD - Protein sequence data, includes RN  
SQD3 - Same as SQD, but 3-letter amino acid codes are used  
SQN - Protein sequence name information, includes RN

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ABS -- Abstract  
APPS -- Application and Priority Information  
BIB -- CA Accession Number, plus Bibliographic Data  
CAN -- CA Accession Number  
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)  
IND -- Index Data  
IPC -- International Patent Classification  
PATS -- PI, SO  
STD -- BIB, IPC, and NCL  
  
IABS --ABS, indented, with text labels  
IBIB -- BIB, indented, with text labels  
ISTD -- STD format, indented

OBIB ----- AN, plus Bibliographic Data (original)  
OIBIB ----- OBIB, indented with text labels

SBIB ----- BIB, no citations  
SIBIB ----- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.

The MAX format is the same as ALL.

The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.

HELP FORMATS -- To see detailed descriptions of the predefined formats.

ENTER DISPLAY FORMAT (IDE):end

=> d hist

(FILE 'HOME' ENTERED AT 14:41:12 ON 31 MAY 2001)

FILE 'REGISTRY' ENTERED AT 14:41:35 ON 31 MAY 2001

L1 STRUCTURE UPLOADED

L2 50 S L1

L3 9873 S L1 SSS FULL

FILE 'CAPLUS' ENTERED AT 14:44:30 ON 31 MAY 2001

FILE 'REGISTRY' ENTERED AT 14:44:44 ON 31 MAY 2001

FILE 'CAPLUS' ENTERED AT 14:44:50 ON 31 MAY 2001

=> s 13/prep

17877 L3

2742217 PREP/RL

L4 4376 L3/PREP

(L3 (L) PREP/RL)

=> s 14 and catalytic oxidation

293346 CATALYTIC

23 CATALYTICS

293354 CATALYTIC

(CATALYTIC OR CATALYTICS)

298861 OXIDATION

3366 OXIDATIONS

299995 OXIDATION

(OXIDATION OR OXIDATIONS)

587857 OXIDN

7581 OXIDNS

589442 OXIDN

(OXIDN OR OXIDNS)

666260 OXIDATION

(OXIDATION OR OXIDN)

14505 CATALYTIC OXIDATION

(CATALYTIC(W)OXIDATION)

L5 165 L4 AND CATALYTIC OXIDATION

=> s 15 and gas phase

1091217 GAS

354258 GASES

1215265 GAS

(GAS OR GASES)

1247631 PHASE

266900 PHASES

1361067 PHASE

(PHASE OR PHASES)

87040 GAS PHASE

(GAS(W) PHASE)

L6 19 L5 AND GAS PHASE

=> d fbib hitstrb abst tot

'HITSTRB' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

'ABST' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats:

ABS ----- GI and AB  
ALL ----- BIB, AB, IND, RE  
APPS ----- AI, PRAI  
BIB ----- AN, plus Bibliographic Data and PI table (default)  
CAN ----- List of CA abstract numbers without answer numbers  
CBIB ----- AN, plus Compressed Bibliographic Data  
DALL ----- ALL, delimited (end of each field identified)  
DMAX ----- MAX, delimited for post-processing  
FAM ----- AN, PI and PRAI in table, plus Patent Family data  
FBIB ----- AN, BIB, plus Patent FAM  
IND ----- Indexing data  
IPC ----- International Patent Classifications  
MAX ----- ALL, plus Patent FAM, RE  
PATS ----- PI, SO  
SAM ----- CC, SX, TI, ST, IT  
SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;  
SCAN must be entered on the same line as the DISPLAY,  
e.g., D SCAN or DISPLAY SCAN)  
STD ----- BIB, IPC, and NCL  
  
IABS ----- ABS, indented with text labels  
IALL ----- ALL, indented with text labels  
IBIB ----- BIB, indented with text labels  
IMAX ----- MAX, indented with text labels  
ISTD ----- STD, indented with text labels  
  
OBIB ----- AN, plus Bibliographic Data (original)  
OIBIB ----- OBIB, indented with text labels  
  
SBIB ----- BIB, no citations  
SIBIB ----- IBIB, no citations  
  
HIT ----- Fields containing hit terms  
HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)  
containing hit terms  
HITRN ----- HIT RN and its text modification  
HITSTR ----- HIT RN, its text modification, its CA index name, and  
its structure diagram  
FHITSTR ----- First HIT RN, its text modification, its CA index name, and  
its structure diagram  
KWIC ----- Hit term plus 20 words on either side  
OCC ----- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field codes. For a list of the display field codes, enter HELP DFIELDS at an arrow prompt (=>). Examples of formats include: TI; TI,AU; BIB,ST; TI,IND; TI,SO. You may specify the format fields in any order and the information will be displayed in the same order as the format specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR, FHITSTR, KWIC, and OCC) may be used with DISPLAY ACC to view a specified Accession Number.  
ENTER DISPLAY FORMAT (BIB):end

=> d fbib hitstr abs full  
'FULL' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats:

ABS ----- GI and AB  
ALL ----- BIB, AB, IND, RE  
APPS ----- AI, PRAI  
BIB ----- AN, plus Bibliographic Data and PI table (default)  
CAN ----- List of CA abstract numbers without answer numbers  
CBIB ----- AN, plus Compressed Bibliographic Data  
DALL ----- ALL, delimited (end of each field identified)

DMAX ----- MAX, delimited for post-processing  
 FAM ----- AN, PI and PRAI in table, plus Patent Family data  
 FBIB ----- AN, BIB, plus Patent FAM  
 IND ----- Indexing data  
 IPC ----- International Patent Classifications  
 MAX ----- ALL, plus Patent FAM, RE  
 PATS ----- PI, SO  
 SAM ----- CC, SX, TI, ST, IT  
 SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;  
 SCAN must be entered on the same line as the DISPLAY,  
 e.g., D SCAN or DISPLAY SCAN)  
 STD ----- BIB, IPC, and NCL  
  
 IABS ----- ABS, indented with text labels  
 IALL ----- ALL, indented with text labels  
 IBIB ----- BIB, indented with text labels  
 IMAX ----- MAX, indented with text labels  
 ISTD ----- STD, indented with text labels  
  
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 SBIB ----- BIB, no citations  
 SIBIB ----- IBIB, no citations  
  
 HIT ----- Fields containing hit terms  
 HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)  
 containing hit terms  
 HITRN ----- HIT RN and its text modification  
 HITSTR ----- HIT RN, its text modification, its CA index name, and  
 its structure diagram  
 FHITSTR ----- First HIT RN, its text modification, its CA index name, and  
 its structure diagram  
 KWIC ----- Hit term plus 20 words on either side  
 OCC ----- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field codes. For a list of the display field codes, enter HELP DFIELDS at an arrow prompt (=>). Examples of formats include: TI; TI,AU; BIB,ST; TI,IND; TI,SO. You may specify the format fields in any order and the information will be displayed in the same order as the format specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR, FHITSTR, KWIC, and OCC) may be used with DISPLAY ACC to view a specified Accession Number.  
 ENTER DISPLAY FORMAT (BIB):end

=> d ibib hitstr abs full  
 'FULL' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats:

ABS ----- GI and AB  
 ALL ----- BIB, AB, IND, RE  
 APPS ----- AI, PRAI  
 BIB ----- AN, plus Bibliographic Data and PI table (default)  
 CAN ----- List of CA abstract numbers without answer numbers  
 CBIB ----- AN, plus Compressed Bibliographic Data  
 DALL ----- ALL, delimited (end of each field identified)  
 DMAX ----- MAX, delimited for post-processing  
 FAM ----- AN, PI and PRAI in table, plus Patent Family data  
 FBIB ----- AN, BIB, plus Patent FAM  
 IND ----- Indexing data  
 IPC ----- International Patent Classifications  
 MAX ----- ALL, plus Patent FAM, RE  
 PATS ----- PI, SO  
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 SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;  
 SCAN must be entered on the same line as the DISPLAY,

e.g., D SCAN or DISPLAY SCAN)

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IABS ----- ABS, indented with text labels

IALL ----- ALL, indented with text labels

IBIB ----- BIB, indented with text labels

IMAX ----- MAX, indented with text labels

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OBIB ----- AN, plus Bibliographic Data (original)

OIBIB ----- OBIB, indented with text labels

SBIB ----- BIB, no citations

SIBIB ----- IBIB, no citations

HIT ----- Fields containing hit terms

HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)  
containing hit terms

HITRN ----- HIT RN and its text modification

HITSTR ----- HIT RN, its text modification, its CA index name, and  
its structure diagram

FHITSTR ----- First HIT RN, its text modification, its CA index name, and  
its structure diagram

KWIC ----- Hit term plus 20 words on either side

OCC ----- Number of occurrence of hit term and field in which it occurs

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All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR, FHITSTR, KWIC, and OCC) may be used with DISPLAY ACC to view a specified Accession Number.  
ENTER DISPLAY FORMAT (BIB):end

=> d fbib hitstr abs tot

L6 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2001 ACS

AN 2001:1172 CAPLUS

DN 134:57094

TI Oxidation process and layered catalyst-containing reactors for the  
manufacture of phthalic anhydride from ortho-xylene and/or naphthalene

IN Okuno, Masaaki; Takahashi, Tsukasa

PA Nippon Shokubai Co., Ltd., Japan

SO Eur. Pat. Appl., 23 pp.  
CODEN: EPXXDW

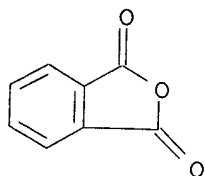
DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1063222	A1	20001227	EP 2000-113022	20000621
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CN 1280979	A	20010124	JP 1999-178788 A	19990624
				CN 2000-109645	20000619
				JP 1999-178788 A	19990624
	JP 2001064274	A2	20010313	JP 2000-189962	20000623
				JP 1999-178788 A	19990624
IT	<b>85-44-9P</b> , Phthalic anhydride				
	RL: IMF (Industrial manufacture); <b>PREP (Preparation)</b> (oxidn. process and layered catalyst-contg. reactors for the manuf. of phthalic anhydride from ortho-xylene and/or naphthalene)				
RN	85-44-9 CAPLUS				
CN	1,3-Isobenzofurandione (9CI) (CA INDEX NAME)				





AB Phthalic anhydride is prepd. in high yield and selectivity by the **gas-phase catalytic oxidn.** of ortho-xylene and/or naphthalene with an oxygen-contg. gas using a fixed-bed reactor. The **gas-phase catalytic oxidn.** process is performed in .gtoreq.3 individual catalytic layers, and the conversion rates of ortho-xylene and/or naphthalene in the individual layers are controlled within specific ranges. This process produces phthalic anhydride in high yield, minimizes deterioration of catalysts with time, and enables the continuous, stable prodn. of phthalic anhydride even when a high concn. of material gas is fed into the reactor.

RE.CNT 5

RE

- (1) Blechschmitt, K; US 4077984 A 1978
- (2) Nagai, K; WPI WORLD PATENT INFORMATION
- (3) Nippon Catalytic Chem Ind; DE 2830765 A 1980 CAPLUS
- (4) Nippon Catalytic Chem Ind; EP 0522871 A 1993 CAPLUS
- (5) Nippon Catalytic Chem Ind; EP 0792866 A 1997 CAPLUS

L6 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2001 ACS

AN 2000:335749 CAPLUS

DN 132:336360

TI Procedure and apparatus for production of gaseous products by catalytic **gas-phase** reaction

IN Rudowski, Werner

PA Gea Luftkuehler G.m.b.H., Germany

SO Ger. Offen., 8 pp.

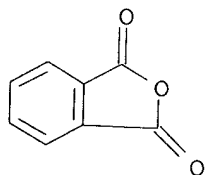
CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19852894	A1	20000518	DE 1998-19852894	19981117
	FR 2785832	A1	20000519	FR 1999-14220	19991112
				DE 1998-19852894A	19981117
IT	<b>85-44-9P</b> , Phthalic anhydride				
RL:	IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); <b>PREP (Preparation)</b> ; PROC (Process)				
	(prodn. by catalytic <b>gas-phase</b> oxidn. of o-xylene or naphthalene)				
RN	<b>85-44-9</b> CAPLUS				
CN	1,3-Isobenzofurandione (9CI) (CA INDEX NAME)				



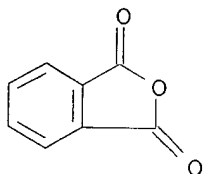
AB Prodn. of gaseous products is carried out in a reactor by (1) preheating of a gas loaded with a charge to a starting temp. in a heating stage and (2) passing through several successive catalytic stages alternating with cooling zones. A resulting reaction gas is withdrawn from the reactor and passed through a desublimation or condensation stage. Preferably, the system is suitable for manuf. of phthalic anhydride from o-xylene or naphthalene by **catalytic oxidn.** in preheated compressed air.

RE.CNT 2

RE

- (1) Anon; DD 275572 A3 CAPLUS  
(2) Anon; DE 3240089 A1 CAPLUS

L6 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2001 ACS  
AN 1999:577831 CAPLUS  
DN 131:286840  
TI Studies on "80 g Process" catalysts for the oxidation of o-xylene to phthalic anhydride  
AU Luo, Guo-qing; Sheng, Ding-Jie; Zhang, Xiu-lan; Zhang, Ming-sen; Hu, Bo  
CS Beijing Research Institute of Chemical Industry, Beijing, 100013, Peop. Rep. China  
SO Shiyou Huagong (1999), 28(8), 505-508  
CODEN: SHHUE8; ISSN: 1000-8144  
PB Shiyou Huagong Bianjibu  
DT Journal  
LA Chinese  
IT **85-44-9P**, Phthalic anhydride  
RL: SPN (Synthetic preparation); **PREP (Preparation)**  
(prepn. of phthalic anhydride by **catalytic oxidn.**  
of o-xylene with titanium-vanadium catalyst coated on talc support)  
RN 85-44-9 CAPLUS  
CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



AB The V-Ti coated catalysts for the prodn. of phthalic anhydride in a two-stage fixed bed reactor through **gas-phase catalytic oxidn.** of o-xylene by mol. oxygen and the influence of main active ingredients (TiO<sub>2</sub>) and co-catalysts (the oxides of Ag, Zn, P, Sb and Rb) on properties of catalysts were studied. The results obtained from bench scale single-tube reactor show that the catalysts have good activity and high selectivity. At a space velocity of 3000 h<sup>-1</sup> and an o-xylene concn. of 80 g/m<sup>3</sup>, a conversion of 100%, phthalic anhydride yield >108% and Ph phthalein content in crude phthalic anhydride of less than 0.04% were obtained. Continued operations using the catalysts proved that the catalysts have good stability and repeatability.

L6 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2001 ACS  
AN 1999:236973 CAPLUS  
DN 130:298294  
TI Catalyst for **catalytic oxidation** use  
IN Kiyooka, Yasushi; Okuno, Masaaki  
PA Nippon Shokubai Co., Ltd., Japan  
SO Eur. Pat. Appl., 22 pp.  
CODEN: EPXXDW

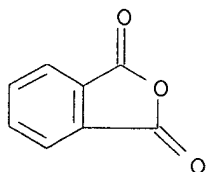
DT Patent  
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 906783	A1	19990407	EP 1998-118537	19980930
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 11104497	A2	19990420	JP 1997-271602 A	19971003
	CN 1213584	A	19990414	JP 1997-271602	19971003
				CN 1998-120776	19980929
	US 6133184	A	20001017	JP 1997-271602 A	19971003
				US 1998-165134	19981002
				JP 1997-271602 A	19971003

IT **85-44-9P**, 1,3-Isobenzofurandione  
RL: SPN (Synthetic preparation); **PREP (Preparation)**  
(prepn. by **catalytic oxidn.** of hydrocarbons in  
presence of titania-supported catalyst)

RN 85-44-9 CAPLUS  
CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



AB A catalyst is claimed for the **catalytic oxidn.**, for example for the prepn. of acid anhydrides and nitrile from a hydrocarbon and the process for the manuf. of an acid anhydride and a nitrile using the catalyst. For the catalyst prepn. a carrier contg. Si carbide, inorg. binding component, and at least one oxide selected from the group consisting of a Nb oxide, an Sb oxide, and a W oxide was used for the support of at least one oxide selected from the group consisting of a V oxide and a Mo oxide as catalytically active component. For example, a carrier consisting of SiC, SiO<sub>2</sub>, mullite and Nb<sub>2</sub>O<sub>5</sub> in a wt. ratio of 90:5:5:1 and contg. < 0.2 % alkali metal and alk. earth metal was prepd. by baking at 1300.degree.. Aq. Ti(SO<sub>4</sub>)<sub>2</sub> was obtained from ilmenite and H<sub>2</sub>SO<sub>4</sub> and reacted with steam to give TiO<sub>2</sub>. The TiO<sub>2</sub> (active catalyst component) was added to an aq. oxalic acid soln. contg. NH<sub>4</sub>VO<sub>3</sub>, NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub>, NbCl<sub>5</sub>, Cs<sub>2</sub>SO<sub>4</sub> and Sb<sub>2</sub>O<sub>3</sub>, baked and the resulting slurry was sprayed onto the carrier. This catalyst was used in the **gas-phase** oxidn. of o-xylene, producing phthalic anhydride in .apprx. 100.simeq. yield.

RE.CNT 11

RE

- (1) Anon; EP 0906783 A1 CAPLUS
  - (2) Consortium Elektrochem Ind; EP 0744214 A 1996 CAPLUS
  - (3) Nippon Catalytic Chem Ind; EP 0163231 A 1985 CAPLUS
  - (4) Nippon Catalytic Chem Ind; EP 0196601 A 1986 CAPLUS
  - (5) Nippon Catalytic Chem Ind; JP 61028456 A 1986 CAPLUS
- ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2001 ACS

AN 1999:32125 CAPLUS

DN 130:155268

TI Highly active degradation-resistant catalysts for **gas-phase catalytic oxidation** of naphthalene for manufacture of phthalic anhydride in high yield

IN Nobusawa, Tatsuya; Suzuki, Toshihide; Saima, Hitoshi; Aono, Toshinao; Fujii, Susumu; Fujishima, Hiroshi

PA Kawasaki Steel Corp., Japan; Catalysts and Chemicals Industries Co., Ltd.  
SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

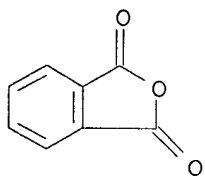
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11005031	A2	19990112	JP 1997-159533	19970617

IT **85-44-9P**, Phthalic anhydride

RL: IMF (Industrial manufacture); **PREP (Preparation)**  
(degrdn.-resistant highly active catalysts for **gas-phase catalytic oxidn.** of naphthalene for manuf. of phthalic anhydride in high yield)

RN 85-44-9 CAPLUS

CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



AB The catalysts comprise V compds., alkali metal compds., S compds., Sb compds., and silica. Silica sol was mixed with (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, vanadyl sulfate, K<sub>2</sub>SO<sub>4</sub>, Cs<sub>2</sub>SO<sub>4</sub>, and Sb<sub>2</sub>O<sub>3</sub> and condensed with steam to give a catalyst contg. V<sub>2</sub>O<sub>5</sub> 4.0, K<sub>2</sub>SO<sub>4</sub> 7.8, Cs<sub>2</sub>SO<sub>4</sub> 8.0, SO<sub>3</sub> 5.1, Sb<sub>2</sub>O<sub>3</sub> 3.2, and SiO<sub>2</sub> 71.9% and having BET sp. surface area 116 m<sup>2</sup>/g and av. particle diam. 64 .mu.m. Naphthalene was fed to a reactor packed with the catalyst and oxidized at 350.degree. to give phthalic anhydride in 82.4% yield and naphthalene conversion 95.0%.

L6 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2001 ACS

AN 1998:590278 CAPLUS

DN 129:246854

TI Preparation of chlorophthalic anhydride by the oxidation of chloroxylene in **gas phase**

AU Li, Shufang

CS Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, 130022, Peop. Rep. China

SO Shiyong Huagong (1998), 27(8), 561-564

CODEN: SHHUE8; ISSN: 1000-8144

PB Beijing Huagong Yanjiuyuan

DT Journal

LA Chinese

IT 30205-85-7P

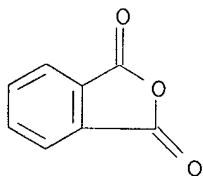
RL: IMF (Industrial manufacture); PUR (Purification or recovery);

**PREP (Preparation)**

(prepn. of chlorophthalic anhydride by oxidn. of chloroxylene in **gas phase**)

RN 30205-85-7 CAPLUS

CN 1,3-Isobenzofurandione, chloro- (9CI) (CA INDEX NAME)



D1-C1

AB Catalysts of high activity and stability for prepn. of chlorophthalic anhydride has been investigated. The 3(4)-chloro-1,2-dimethylbenzene was used as raw material. **Catalytic oxidn.** in the **gas phase** was carried out under the following conditions: concn. of Cl.cntdot.C<sub>6</sub>H<sub>3</sub>.cntdot.(CH<sub>3</sub>)<sub>2</sub> 0.7-1.73% (mol); specific velocity 1300-6000 h<sup>-1</sup>; temp. 410.degree.-500.degree.. Neither phthalic anhydride nor polychlorophthalic anhydride was found in the reaction product. The wt. yield of chlorophthalic anhydride was 98%. The purity of chlorophthalic anhydride was >98%.

L6 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2001 ACS

AN 1998:535778 CAPLUS

DN 129:161487

TI Preparation of phthalic anhydride by **catalytic oxidation** of naphthalene

IN Suzuki, Toshio; Takagi, Yoshinori; Nobusawa, Tatsuya

PA Kawasaki Steel Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 10218872	A2	19980818	JP 1997-29964	19970214

OS CASREACT 129:161487

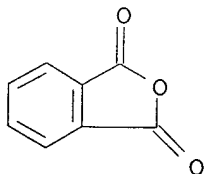
IT **85-44-9P**, Phthalic anhydride

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); **PREP (Preparation)**

(prepn. of phthalic anhydride by oxidn. of naphthalene using SiO<sub>2</sub> catalysts contg. V, alkali metals, S, and P)

RN 85-44-9 CAPLUS

CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



AB Phthalic anhydride (I) is prepd. by **gas-phase** oxidn. of naphthalene (II) using (a) fluidized-bed catalysts comprising SiO<sub>2</sub>, V compds., alkali metal compds., and S compds. and (b) SiO<sub>2</sub> supporting P compds. by mixing (a) and (b) in a fluidized-bed reactor. Addn. of P compds. inhibits overoxidn. of II to improve selectivity of I. A fluidized-bed catalyst contg. SiO<sub>2</sub>, V<sub>2</sub>O<sub>5</sub>, M<sub>2</sub>SO<sub>4</sub> (M = K, Cs), and SO<sub>3</sub> (prepn. given) and SiO<sub>2</sub> contg. P (prepn. given) were used for fluidized-bed oxidn. of II at 2 kgf/cm<sup>2</sup>G and 360.degree. to give 93% I after 120 h, vs. 87% for a control using no P-contg. SiO<sub>2</sub>.

L6 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2001 ACS

AN 1993:168754 CAPLUS

DN 118:168754

TI Vapor-phase **catalytic oxidation** of 4-cyclohexyl-o-xylene

AU Shapovalov, A. A.; Sembaev, D. Kh.

CS Inst. Khim. Nauk, Alma-Ata, Kazakhstan

SO Izv. Akad. Nauk Kaz. SSR, Ser. Khim. (1991), (3), 63-6

CODEN: IKAKAK; ISSN: 0002-3205

DT Journal

LA Russian

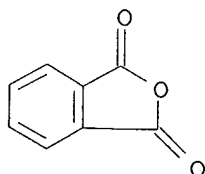
IT **85-44-9P**, 1,3-Isobenzofurandione

RL: FORM (Formation, nonpreparative); **PREP (Preparation)**

(formation of, in vapor-phase oxidn. of cyclohexylxylene catalyzed by vanadium pentoxide-stannous dioxide)

RN 85-44-9 CAPLUS

CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



AB Vapor-phase oxidn. of 4-cyclohexyl-o-xylene catalyzed by V<sub>2</sub>O<sub>5</sub>-SnO<sub>2</sub> at 360-420.degree. gave 4-cyclohexyl- and phenylphthalic anhydrides, 6-oxobiphenylene-2,3-dicarboxylic anhydride, phthalide, phthalic and maleic anhydrides, CO, and CO<sub>2</sub>.

L6 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2001 ACS

AN 1988:111997 CAPLUS

DN 108:111997

TI Separation and extraction of **gas phase** oxidation products of naphthalene

IN Nishizaki, Tadao; Minami, Ryohei

PA Sumikin Coke and Chemicals Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

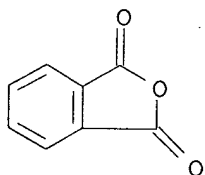
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62120376	A2	19870601	JP 1985-259343	19851119
IT	<b>85-44-9P</b> , Phthalic anhydride				
	RL: FORM (Formation, nonpreparative); <b>PREP (Preparation)</b> (formation of, in oxidn. of naphthalene)				
RN	85-44-9 CAPLUS				
CN	1,3-Isobenzofurandione (9CI) (CA INDEX NAME)				



AB Naphthoquinone (I) and phthalic acid (II) were sepd. from an aq. slurry of the **gas-phase** oxidn. products of naphthalene using arom. hydrocarbons as solvents. Aq. slurry contg. I 60.0, II 66.7, and H<sub>2</sub>O 2000 g was stirred with 400 g 1,2,4-Me<sub>3</sub>C<sub>6</sub>H<sub>3</sub> at 90.degree., then kept undisturbed to give aq. phase contg. 0.13% I, and 3.25% II, and oil phase contg. 13.49% I and 0.07% II.

L6 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2001 ACS

AN 1987:32506 CAPLUS

DN 106:32506

TI **Gas-phase catalytic oxidation** of 1- and 2-bromonaphthalenes

AU Shapovalov, A. A.; Sembaev, D. Kh.

CS Inst. Khim. Nauk, Alma-Ata, USSR

SO Izv. Akad. Nauk Kaz. SSR, Ser. Khim. (1986), (1), 52-5

CODEN: IKAKAK; ISSN: 0002-3205

DT Journal

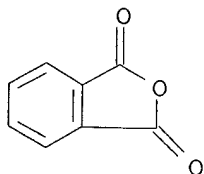
LA Russian

IT **85-44-9P**, Phthalic anhydride

RL: SPN (Synthetic preparation); **PREP (Preparation)**  
(prepn. of, from bromonaphthalene by oxidn.)

RN 85-44-9 CAPLUS

CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



AB The direction of title oxidn. over V oxide was detd. by the location of the Br. Thus, 1-bromonaphthalene gave phthalic anhydride, while 2-bromonaphthalene gave 4-bromophthalic anhydride.

L6 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2001 ACS

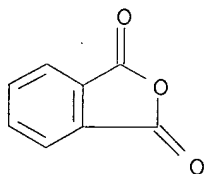
AN 1983:215285 CAPLUS

DN 98:215285

TI Isolation and identification of by-products of **gas phase catalytic oxidation** of anthracene to 9,10-anthraquinone

AU Chvatal, Ivan; Vymetal, Jan; Pecha, Jaroslav; Simanek, Vilim; Dolejs,

Ladislav; Barton, Josef; Frycka, Josef  
 CS Urx Works, Res. Inst. Coal Tar Chem., Valasske Mezirici, 757 27, Czech.  
 SO Collect. Czech. Chem. Commun. (1983), 48(1), 112-22  
 CODEN: CCCCAK; ISSN: 0366-547X  
 DT Journal  
 LA English  
 IT **85-44-9P**  
 RL: FORM (Formation, nonpreparative); **PREP (Preparation)**  
 (formation of, as byproduct in **gas phase** oxidn. of  
 anthracene)  
 RN 85-44-9 CAPLUS  
 CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



AB A total of 29 assocd. components were identified in tech.  
 9,10-anthraquinone. The product contained all the prominent impurities  
 present in the starting anthracene except for 9,10-dihydroanthracene and  
 fluorene. 9-(9-Anthryl)carbazole and Diels-Alder type adducts of  
 anthracene with maleic anhydride and with maleimide were also detected.  
 The isolated and identified by-products of oxidn. of anthracene were  
 1,4-anthraquinone, 4,4'-dioxo-1,1'-bianthrylidene, 4,10'-dioxo-1,9'-  
 bianthrylidene, 1-(4-oxy-1-naphthylidene)-4-oxyanthracene,  
 2,3-naphthalenedicarboxylic acid and anhydride, and 5,7,12,14-tetrahydro-  
 5,14;7,12-di(o-benzo)pentacene-6,13-dione. Dibenzo[b,d]pyrone,  
 xanthone, 1,8-naphthalenedicarboxylic anhydride, 9-fluorenone, and  
 naphtho[2,3-b]thiophene-4,9-dione were isolated and identified as oxidn.  
 products of anthracene impurities. Phthalic anhydride, phthalimide,  
 maleic anhydride, maleimide, phthalic acid, and maleic acid were found as  
 products of deeper oxidn. of the starting materials. Four addnl.  
 components whose structure could not be detd. were also isolated. The  
 pathway of the anthracene oxidn. is suggested.

L6 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2001 ACS  
 AN 1980:450244 CAPLUS  
 DN 93:50244  
 TI Catalyst for **gas phase** oxidation of hydrocarbons  
 IN Werner, Ulrich; Forner, Christoph; Geissler, Werner; Kraft, Manfred;  
 Kripylo, Peter; Ritter, Dieter  
 PA VEB Leuna-Werke "Walter Ulbricht", Ger. Dem. Rep.  
 SO Ger. (East), 9 pp.  
 CODEN: GEXXA8

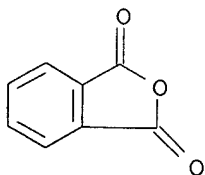
DT Patent  
 LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DD 138736	Z	19791121	DD 1978-207770	19780912
IT	<b>85-44-9P</b>				

RL: **PREP (Preparation)**  
 (manuf. of, by xylene oxidn., catalysts for)

RN 85-44-9 CAPLUS  
 CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



AB Catalysts for the oxidn. of o-xylene [95-47-6] to phthalic anhydride (I) [85-44-9] contain oxides of Ti and V on macroporous, inert supports with low surface areas. Thus, a soln. (TiO concn. 4-6%) prepd. from 2 kg TiO<sub>2</sub> and 320 mL H<sub>2</sub>SO<sub>4</sub> at 170.degree. is dild. with 380 mL H<sub>2</sub>O and heated 5 h at 650.degree. to give TiO<sub>2</sub> which is ground to 0.05-0.2 mm particle size. A slurry is prepd. from this TiO<sub>2</sub> 28.2, oxalic acid 7, NH<sub>4</sub> phosphate 0.24, Al(NO<sub>3</sub>)<sub>3</sub> 0.64, tungstic anhydride 0.02, sucrose [57-50-1] 2.4, V<sub>2</sub>O<sub>5</sub> 2.4, and H<sub>2</sub>O 80 g at 80.degree., and 25 g (as solids) slurry is applied to 45 g 5-mm corundum particles (0.1-7.5 .mu. pores 0.12 mL/g and 7.5-50 .mu. pores 0.14 mL/g pore vol.), dried 6 h at 120.degree., and calcined 3 h at 500.degree.. Passing o-xylene at vol. space velocity 4400/h with 1% SO<sub>2</sub> and 1 m<sup>3</sup> air/43 g xylene over this catalyst gives 115 parts I/100 parts xylene.

L6 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2001 ACS

AN 1972:140250 CAPLUS

DN 76:140250

TI Phthalic anhydride

IN Hojo, Shiro; Komiya, Kuniko

PA Japan Gas-Chemical Co., Inc.

SO Japan., 5 pp.

CODEN: JAXXAD

DT Patent

LA Japanese

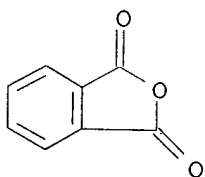
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 47007537	B4	19720303	JP	19670313
IT	<b>85-44-9P</b>				

RL: IMF (Industrial manufacture); **PREP (Preparation)**  
(manuf. of, catalysts for)

RN 85-44-9 CAPLUS

CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



AB The **gas-phase** oxidn. of o-xylene (I) over V<sub>2</sub>O<sub>5</sub>, TiO<sub>2</sub>, and K<sub>2</sub>SO<sub>4</sub> [1:0.3-5:0.01-0.2 (molar)], manufd. from NH<sub>4</sub>VO<sub>3</sub>, oxalic acid, K<sub>2</sub>SO<sub>4</sub>, TiCl<sub>4</sub>, and alundum, gave .apprx.10% phthalic anhydride at 420.degree..

L6 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2001 ACS

AN 1971:87650 CAPLUS

DN 74:87650

TI Purification of phthalic anhydride

IN Friedrichsen, Wilhelm; Goehre, Otto

PA Badische Anilin- und Soda-Fabrik A.-G.

SO Ger. Offen., 7 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

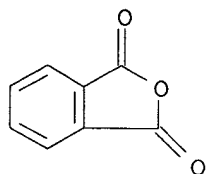
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 1935008	A	19710114	DE 1969-1935008	19690710
IT	<b>85-44-9P</b>				

RL: PUR (Purification or recovery); **PREP (Preparation)**  
(purification of)

RN 85-44-9 CAPLUS

CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)





AB (Badische Anilin-und Soda-Fabrik A.-G.) The title compd. (I), prepd. by **catalytic oxidn.** of naphthalene or o-xylene with air at 440-500.degree., was freed from impurities (phthalide) causing a coloration of I and its reaction products, e.g., plasticizers, by heating the crude I with V2O5 on a carrier, together with some air, at 200-70.degree. and (or) in the **gas phase** during subsequent distn. at 285-350.degree..

L6 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2001 ACS

AN 1970:530787 CAPLUS

DN 73:130787

TI Preparation of carboxylic acids and anhydrides by partial **catalytic oxidation** on solid contact masses of aromatic hydrocarbons or unsaturated aliphatic hydrocarbons

PA Badische Anilin- und Soda-Fabrik A.-G.

SO Fr. Demande, 8 pp.

CODEN: FRXXBL

DT Patent

LA French

FAN.CNT 1

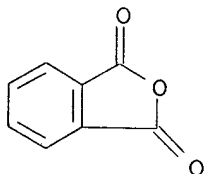
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2012297		19700320		
IT	85-44-9P			DE	19680704

RL: **PREP (Preparation)**

(manuf. of, by oxidn. of xylene, app. for)

RN 85-44-9 CAPLUS

CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



AB o-Xylene is oxidized in the **gas phase** at 385.degree. to give phthalic anhydride in an app. which is described; the heat exchanger moves in the same direction as the reactants. A catalyst contg. anatase and a small amt. of vanadic anhydride is used.

L6 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2001 ACS

AN 1970:476904 CAPLUS

DN 73:76904

TI Phthalic anhydride

IN Ishida, Kinzo; Yamamoto, Ryuichi; Watanabe, Yoshisuke

PA Mitsui Toatsu Chemicals Co., Ltd.

SO Japan., 4 pp.

CODEN: JAXXAD

DT Patent

LA Japanese

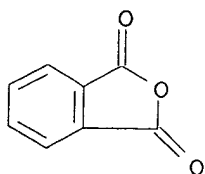
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 45021498	B4	19700721	JP	19670314
IT	85-44-9P				

RL: **PREP (Preparation)**

(manuf. of, by oxidn. of xylene)

RN 85-44-9 CAPLUS  
CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



AB An improvement in the **gas phase catalytic oxidn.** of .omicron.-xylene is described. In an example, SO<sub>2</sub> is introduced into a mixt. of 84.5 g ammonium metavanadate, 250 ml 31.5% H<sub>2</sub>SO<sub>4</sub>, 63 g K<sub>2</sub>SO<sub>4</sub>, 40 g Li<sub>2</sub>SO<sub>4</sub>, and 317.3 g TiO added, the mixt. made into tablets, and the tablets burned 6 hr at 400.degree. to give a catalyst (I). I (200 ml) is placed in a reactor and .omicron.-xylene introduced together with SO<sub>2</sub> to give phthalic anhydride of 99% purity.

L6 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2001 ACS  
AN 1969:67951 CAPLUS  
DN 70:67951  
TI Purification of phthalic anhydride  
IN Komatsu, Tatsutomi; Nasu, Katsuaki; Hirai, Eiji  
PA Kawasaki Kasei Chemicals, Ltd.  
SO Japan., 3 pp.  
CODEN: JAXXAD

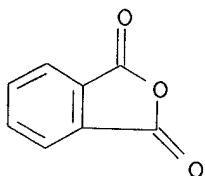
DT Patent  
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 43019930	B4	19680828	JP	19650724
IT	85-44-9P				

RL: PUR (Purification or recovery); **PREP (Preparation)**  
(purification of)

RN 85-44-9 CAPLUS  
CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



AB Phthalic anhydride (I) obtained by catalytic **gas phase oxidn.** of o-xylene is purified by heating with carbonates of alkali or alk. earth metals, followed by distn. after addn. of H<sub>2</sub>SO<sub>4</sub>. At least 1 mole H<sub>2</sub>SO<sub>4</sub> to 1 mole carbonate is necessary. Thus, 600 g. I obtained by **catalytic oxidn.** of o-xylene was charged in a 1-l. flask with 0.24 g. K<sub>2</sub>CO<sub>3</sub> and the mixt. heated at 280.degree. for 5 hrs. Then, 0.20 ml. concd. H<sub>2</sub>SO<sub>4</sub> was added to the melted I at 250.degree. and kept at that temp. for 30 min. The mixt. was distd., using a 400-mm. rectification column filled with helix rings, to give 94.8% total distillate and 82.5% main distillate. Without H<sub>2</sub>SO<sub>4</sub>, the total distillate was 88.8% and the main 58.5%. Quality of the main distillate was improved (purity 99.8%), m. 131.1-1.2.degree..

L6 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2001 ACS  
AN 1968:49313 CAPLUS  
DN 68:49313  
TI Phthalic anhydride  
IN Joklik, Otto  
SO Austrian, 7 pp.  
CODEN: AUXXAK  
DT Patent

LA German

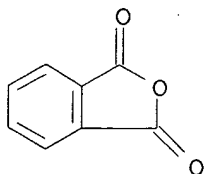
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	AT 258892		19671211	AT	19650913
IT	85-44-9P				

RL: PREP (Preparation)  
(manuf. of, by oxidn. of naphthalene with air with irradiation by .gamma.-rays)

RN 85-44-9 CAPLUS

CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



AB In a process for the manuf. of phthalic anhydride by **catalytic oxidn.** of crude naphthalene with air in the **gas phase** over liquid or solid contacts with irradiation with high-energy electromagnetic waves, the gaseous reactants naphthalene and O are irradiated with .gamma.-rays of .gtoreq.1 Mev. generated by synthetic radioactive elements, e.g. by <sup>60</sup>Co, before entering the reaction chamber. The thus excited and ionized reactants are passed over a catalyst consisting of V2O5, and optionally the oxides of W, Mo, and Sn, suspended on a ceramic carrier which has been annealed at 1200.degree.. Preferably .gamma.-ray sources with 500,000-800,000 r./hr. are used. A preferred catalyst consists of carrier globules of 4-5 mm. diam. contg. Al2O3 26.1, TiO2 2.1, Fe2O3 1.1, alk. earth metals 1.4%, the active component consisting of V2O5 8, MoO3 0.4, WO3 0.4, and SnO2 0.4%, calcd. on the wt. of the final catalyst. An app. for conducting the process is described, consisting of a tubular furnace in which the radioactive source is arranged in the middle axis of the inlet for the gaseous reactants.

L6 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2001 ACS

AN 1967:10707 CAPLUS

DN 66:10707

TI Vapor-phase **catalytic oxidation** of benzocyclobutene

AU Bernardini, Francesco; Armisi, Icilio; Ramacci, Marcello

CS Centro Ric. Gruppo B.P.D., Rome, Italy

SO Chim. Ind. (Milan) (1966), 48(10), 1061-5

CODEN: CINMAB

DT Journal

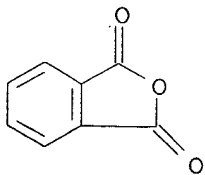
LA Italian

IT 85-44-9P

RL: SPN (Synthetic preparation); **PREP (Preparation)**  
(prepn. of, from bicyclo[4.2.0]octatetraene)

RN 85-44-9 CAPLUS

CN 1,3-Isobenzofurandione (9CI) (CA INDEX NAME)



GI For diagram(s), see printed CA Issue.

AB Phthalic anhydride can be produced by **gas phase oxidn.** of benzocyclobutene (I) over a V2O5 catalyst. The catalyst carrier is corindon. I reacts with O in air yielding phthalan (II) as the first reaction product. II is oxidized partially to phthalide (III) and to o-phthalic dialdehyde (IV). Both III and IV undergo oxidn. to give phthalic anhydride (V). There is evidence that phthalan is formed by

direct fast reaction of O with the diene form of I. IV can be obtained in substantial amts. operating at low temp. Probable reaction mechanisms are analyzed. Highest conversion appears to occur with 0.07-sec. residence time at 460.degree. and 180 mole of air per mole I in feed. Conversion is 84.4% and the product contains 68.8 weight % of V.

=> log y

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
89.97	240.56

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-11.17	-11.17

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NEWS 3	Feb 06 Engineering Information Encompass files have new names
NEWS 4	Feb 16 TOXLINE no longer being updated
NEWS 5	Apr 23 Search Derwent WPINDEX by chemical structure
NEWS 6	Apr 23 PRE-1967 REFERENCES NOW SEARCHABLE IN CAPLUS AND CA
NEWS 7	May 07 DGENE Reload

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